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From Social Acceptance to Cognitive Dissonance: The Psychological Pathways of Compulsive Buying

Saba Muneer
PhD Scholar
Department of Management Sciences, Superior University, Lahore, Pakistan
Email: saba@vu.edu.pk
(Corresponding Author)
ORCID ID: 0009-0004-1776-2746

Nadia Nasir
Associate Professor
Department of Management Sciences, Faculty of Management, Superior University, Lahore, Pakistan.
Email: nadia.nasir@superior.edu.pk
ORCID ID: 0000-0002-5945-6112

Bilal Ahmad
Associate Professor
Department of Management Sciences, Faculty of Management, Superior University, Lahore, Pakistan.
E-mail: drbilal.ahmad@superior.edu.pk
ORCID ID: 0000-0002-0362-0489

Nida Qamar
Lecturer
Department of Management Sciences, Virtual University of Pakistan, Islamabad, Pakistan.
E-mail: nida.qamar@vu.edu.pk
ORCID ID: 0009-0007-4441-7448

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Abstract: *This study examines the need for online social acceptance and belongingness as catalysts for e-compulsive buying behavior (ECBB) and resulting cognitive dissonance. It further assesses self-esteem as a moderator and examines its impact on the relationship between ECBB and the need for online social acceptance and belongingness. Data was collected through purposive sampling from 276 women who actively use social networking sites. Partial least squares structural equation modeling was used to analyze the data. The findings show that the need for online social acceptance and belongingness has a positive relationship with ECBB. Moreover, the study demonstrates a positive association between ECBB and cognitive dissonance. However, relationships remain unaffected by self-esteem, primarily because of cultural and demographic factors. The results are helpful for policymakers and mental health professionals seeking to actively promote awareness and reduce the psychological impacts that social networking sites have on women.*

Keywords: Social acceptance, social belongingness, e-compulsive buying behavior, cognitive dissonance, self-esteem.

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1. Introduction

Individuals can face discomfort when their beliefs and actions conflict, which motivates them to adjust their behavior. This is known as cognitive dissonance (CD), where behaviors, attitudes, and conflicting thoughts coexist, leading to emotional and physical discomfort (Festinger, 1957). This is especially relevant today, given the prevalence of online shopping sites and how e-commerce has transformed purchasing traditions. It has led to new addictions, such as e-compulsive buying behavior (ECBB) and the resulting CD (Rahman & Hossain, 2023). Compulsive buying is recognized as a distinct behavioral matter and is characterized by behavioral issues, time commitments, a lack of control, and financial concerns. Research into individuals' shopping and buying behavior shows that the purpose of shopping has evolved beyond meeting utilitarian needs (Owusu et al., 2023). Thus, for some, shopping now satisfies additional needs, including emotional, social, cultural, and psychological needs (Chen, 2023). Among these, the need to belong (NTB) is significantly associated with various domains of life (Zhang et al., 2024).

Research in social psychology demonstrates that a sense of belongingness to a group of individuals boosts prosocial behaviors despite the potential costs of membership (Baumeister & Leary, 1995). Conversely, social exclusion is a widespread phenomenon that can negatively affect individuals. In such situations, individuals pursue impulsive consumption to achieve a sense of belongingness and improve social relations (Zhang et al., 2024).

Another aspect of social relationships is social acceptance (SA). Since the significance of behavior is largely based on others' approval (Vahdat et al., 2021), individuals often follow social norms and emulate the behavior of others to achieve social acceptance. Consequently, the need for social approval pushes individuals into purchasing behaviors that are influenced by perceived social status (Yurchisin & Johnson, 2004). This is especially true in today's technological era, where the convenience of shopping has increased individuals' need for unlimited material goods,

stimulating compulsive buying behavior (CBB). This is supported by the self-determination theory (SDT) presented by Ryan and Deci (2023).

SDT proposes a structure to understand the motivational sources of personality and social behavior based on the psychological needs (Ryan & Deci, 2023) that lead to impulse buying, post-purchase regret, and CD (Chetioui & El Bouzidi, 2023). These psychological needs include belongingness and the desire for acceptance and external support (Van Ryzin et al., 2009).

Compulsive buying is a strengthened form of impulse buying propensity (Olsen et al., 2021) that has been linked to negative consequences for self-esteem (SE), social responses, and personal economics (Rook, 1987). Low SE is theorized to be both a predisposition to and primary impetus for unnecessary impulsive buying (Dhandra, 2020). Nonetheless, it is a key condition for consumption compensation because individuals with high and low SE pursue distinct self-related motives in their purchases (Stuppy et al., 2020). In addition, SDT states that the degree of SE is determined by the engagement of internal progressive processes with the social environment. This interplay can either achieve or frustrate the basic psychological needs of belongingness and SA.

Past research confirms that SE plays a fundamental role in consumption patterns (Yurchisin & Johnson, 2004) and that people involved in CBB have lower SE and a higher probability of possessing compulsiveness as a personality trait (O'Guinn & Faber, 1989). However, there is still a need to examine whether variations in individuals' SE levels affect the strength or direction of the relationship between ECBB and the need for SA and NTB.

SE has already been investigated as a moderator between perceived discrimination and psychological distress in a sample of women (Corning, 2002). Its moderating effect on women's responses to social comparisons has also been explored. What remains, however, is its role in moderating the relationship between ECBB and the need for SA and NTB (Stuppy et al., 2020).

CBB has already been investigated with psychological and social variables like impulsivity (Müller et al., 2015), anxiety and mood disorders (Paul et al., 2015), stress (Luigjes et al., 2019), personality traits (Gibbs &

Oltmanns, 1995), substance use disorders (Mancebo et al., 2009), and social comparison (Attiq & Azam, 2015). However, the relationship between ECBB and the need for SA and NTB remains unexplored.

The current study addresses these research gaps by investigating the impact of NTB and SA on ECBB and whether it results in eventual CD. The study also tests SE's moderating role in the relationship between ECBB and the need for SA and NTB. This is achieved by utilizing a sample of women in Pakistan involved in CBB primarily on social networks.

The argument for targeting women is that they are more inclined to engage in impulse purchasing (Chetioui & El Bouzidi, 2023). Further, according to Statista (2024), 71.7 million women are active social media users (of 111 million internet users in Pakistan). Given these figures and the fact that growing numbers of women experience CBB and CD, this study draws attention to a vulnerable population susceptible to CBB due to the social pressures associated with fashion, attire, appearance, and social status (Vogel et al., 2019). It is noteworthy that revenue from the women's apparel market in Pakistan amounted to USD 2.37 billion in 2025. In addition, Pakistan's growing middle class has led to increased demand for fashion and women's apparel.

Research suggests that women tend to be more socially engaged and possess broader networks. Consequently, they are generally more active on social networking sites (SNS) compared to men and may be more susceptible to the adverse mental health outcomes linked to high levels of usage, particularly in relation to activities such as communication, relationship maintenance, and social comparison (Scott et al., 2020). Thus, this focus on women is suitable for our study, given their distinct social media usage patterns, purchasing behaviors, and cognitive sensitivity. Acknowledging these influences may support the development of strategies to mitigate CBB among women.

Our findings guide initiatives aimed at significant social and psychological factors triggering CBB to mitigate the need for social approval (Villardefrancos & Otero-López, 2016). Comprehending these relationships can guide mental health professionals to implement measures that address CBB and its psychological outcomes. Consequently, this study seeks to assess the association between ECBB (and associated CD) and the need for belongingness and SA.

This paper is systematically structured to ensure clarity and coherence. Section 1 introduces the study, Section 2 provides an overview of the theoretical framework and literature review, Section 3 describes the research methods, Section 4 reports our results, Section 5 discusses and compares the results with previous studies, and Section 6 summarizes the results and provides recommendations for further research.

2. Theoretical Background and Literature Review

2.1. Self-Determination Theory as a Theoretical Background

We employ SDT (Ryan and Deci, 2023), which focuses on human motivation and personality, accentuating the role of intrinsic and extrinsic motivations in stimulating behavior, to support our theoretical framework. SDT proposes a framework to understand the motivations behind social behavior and the relationship of core emotional needs to wellbeing, mental health, and a superior standard of living. Thus, NTB and social approval align with this theory, showing how individuals seek social approval and connect with others to achieve a feeling of social inclusion (Baumeister & Leary, 1995). SDT also explains how these inspirations trigger contextual responses and social and cognitive change (Legault, 2020), like CBB (a contextual and cognitive response) and SE and CD (a cognitive response).

Hence, mental and behavioral constructs are examined from an SDT lens. Individuals who engage in compulsive buying to fulfill extrinsic needs, such as the desire for belonging, may later encounter internal conflict when they recognize that their purchases are misaligned with their intrinsic values.

Ryan and Deci's (2000) theory also addresses the fulfillment of psychological needs and how they foster greater self-motivation and mental wellbeing. When such psychological needs are not fulfilled, the result is reduced motivation and poorer psychological health.

Subawa et al. (2022) state that impulse buying leads to post-purchase dissonance. Hence, CD emerges as a psychological outcome when behaviors like ECBB are motivated by unmet or externally imposed psychological needs, ultimately resulting in emotional conflict and regret.

2.2. *Social Acceptance, Social Belongingness, and E-Compulsive Buying Behavior*

SA is a type of social relationship conceived as an aspect of belongingness (Malone et al., 2012) and is defined as 'an individual's sense of being included, encouraged, valued, and welcomed by their social context'. It makes individuals feel important and respected. Research indicates that being socially connected and accepted affects individuals' mental health and overall wellbeing. This is why individuals engage in social comparison to improve themselves (Crusius et al., 2022), paving the way for CBB (Islam et al., 2018). Yurchisin and Johnson (2004) establish a positive relationship between CBB and perceived social status, purchasing behavior, and involvement with apparel products. Gao et al. (2024) further confirm that utilizing social media and upward social comparison potentially influence ECBB.

Per social comparison theory (Festinger, 1957), individuals analyze their self-worth and capabilities by comparing themselves with others, which affects their SE, social identity, and the quest for SA. In addition, SA, as a dimension of belongingness, is a key human motivation for positive relationships and the desire for acceptance, inclusion, and connection with others (Baumeister & Leary, 1995). Subsequently, compulsive buying is often fueled by the desire to conform to a social group or portray a particular image (Gao et al., 2024). Further, the need for belongingness drives individuals to purchase goods that enhance their status, appearance, or inclusion within a specific social context (Schiffman et al., 2010). Research also indicates that countersigning materialism leads individuals to augment their feelings and individuality through purchases, thereby predicting CBB (Dittmar et al., 2007). Hence, we propose the following hypotheses:

H1: SA and ECBB have a significant positive relationship.

H2: The need for belongingness and ECBB have a significant positive relationship.

H3: ECBB mediates the relationship between the need for SA and CD.

H4: ECBB mediates the relationship between the need for belongingness and CD.

2.3. Compulsive Buying Behavior and Cognitive Dissonance

Impulsive buying is an unexpected and persuasive desire to purchase without considering consequences (Rook, 1987). It occurs when consumers see attractive products, which pressures their impulse to purchase. However, repetitive impulse purchasing behavior results in losing control over purchases and paves the way to CBB (Dittmar et al., 2007). Hence, CBB is considered a strengthened and intensified form of impulsive buying (Olsen et al., 2021). The repetitive use of SNS has been determined to cause impulse purchases and subsequent CBB.

In this regard, prevalent internet and smartphone use aids consumers in making quick purchases, triggering impulsive buying, CD, and subsequent product returns (Verhagen & Van Dolen, 2011). Thus, online shopping has a greater potential risk of post-purchase dissonance than conventional shopping methods.

Furthermore, globalization has spread consumer culture worldwide, leading to increased status consumption and compulsive buying, which often cause financial loss and regret. While this is established in Western countries, similar trends are now rising in developing nations, where exposure to new products and markets intensifies compulsive buying and its negative social effects (Bushra & Bilal, 2014).

Societies that believe in individualism are likely to accept and be influenced by global consumer culture. Conversely, societies that believe in collectivism are less influenced by it, are less prone to impulse buying, and struggle to manage their finances (Czarnecka et al., 2020). Additionally, a cross-cultural study by Wang and Zhai (2022) compares Chinese and US consumers, reporting that the latter exhibit higher materialism and a greater inclination toward compulsive buying than the former. A study conducted in India finds that credit card use by urban Indian consumers and the upper middle class facilitates CBB. The study states that credit card purchases are associated with a higher incidence of consumer guilt (Dugar et al., 2014). Another study demonstrates a positive relationship between hedonic and utilitarian shopping experiences, online advertisements, and consumer guilt, with impulse buying acting as a mediator (Chauhan et al., 2020). Given that CBB is considered a reinforced form of impulse buying (Olsen et al., 2021), we hypothesize that:

H5: ECBB and CD have a significant positive relationship.

2.4. Self-Esteem as a Moderating Variable

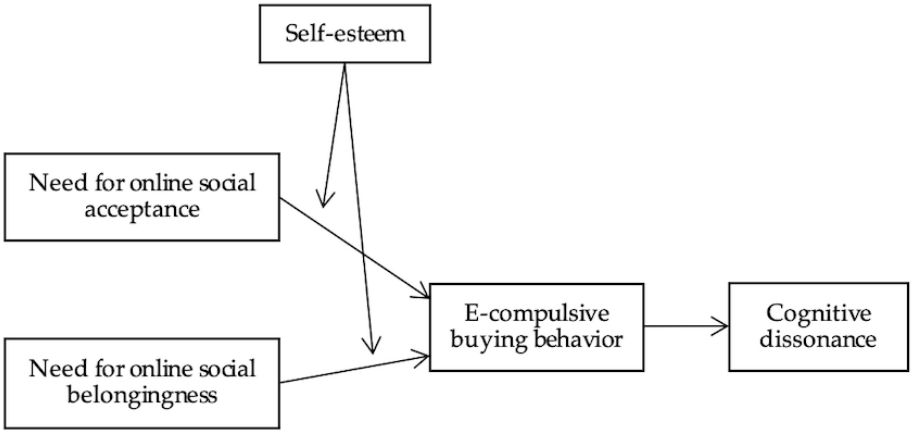
As noted in the literature, individuals subjectively assess SE, a crucial component of self-concept. This subjective evaluation distinguishes SE from objective traits and abilities, making it a key indicator of personal successes and disappointments, as underscored by Krause et al. (2021). Although there are ongoing debates in the scientific community about its widely promoted benefits, SE continues to be a prominent area of study in behavioral and social sciences, as emphasized by Orth and Robins (2022). In this context, a behavioral disorder (compulsive buying) interferes with daily functioning and can lead to significant psychological and financial problems. In particular, the desire to enhance emotions linked to SE is a key motivator that can strongly predict this type of behavioral addiction (Dittmar et al., 2007). There is a relatively robust correlation between SE and subjective wellbeing, which is particularly pronounced in Western cultures where it is commonly assumed that individuals are driven by the desire to maintain a positive self-image (Diener & Diener, 1995).

In some cultural contexts, traits such as high SE, autonomy, independence, a strong sense of self, and individualism are regarded as essential components of a fulfilling life. However, in more collectivistic societies, these same attributes may be perceived as illusory or less relevant to the concept of wellbeing (Olsen et al., 2021). Furthermore, SE is closely related to traits that attract others' acceptance; one's social role influences these traits. Leary et al. (2001) indicate that perceived acceptance and dominance contribute uniquely to the variance in SE. In addition, existing research shows that the need for a strong sense of belongingness is associated with lower wellbeing, indicating that a strong desire for social connection can lead to difficulties (Verhagen et al., 2018). Thus, to establish if high or low SE affects SA and belongingness in relation to CBB, we propose the following hypotheses:

H6: SE moderates the relationship between ECBB and the need for SA.

H7: SE moderates the relationship between ECBB and the need for belongingness.

Figure 1: Theoretical framework



3. Methodology

Drawing upon literature and established theories, this research constructs theoretical relationships between the studied variables. These relationships are subsequently validated via data collection from respondents. Thus, for this study, a quantitative research approach is deemed appropriate as it aims to generalize its outcomes; deduction emerges as the preferred approach (Saunders et al., 2014).

3.1. Statistical Methods

The study employs structural equation modeling (SEM) with the partial least squares (PLS) technique via SmartPLS 4.0 as described by Ringle et al. (2023). The first phase entails assessing the constructs' reliability and validity and investigating the structural associations of latent variables. Assessing significance using SmartPLS can be challenging when data deviates from a normal distribution (Hair et al., 2017). To mitigate this issue, the data's normality is assessed using skewness and kurtosis in the WebPower tool. This shows that skewness and kurtosis are within acceptable limits of +2, demonstrating that all variables meet acceptable distributional standards. Furthermore, the nonsignificant Mardia's skewness and kurtosis values confirm that the data does not meet the assumptions of multivariate normality. Thus, SmartPLS was deemed suitable for data analysis. Univariate skewness and kurtosis are shown to evaluate data normality. However, Mardia's skewness and kurtosis values

follow multivariate normality assumptions, which are prerequisites for using SmartPLS.

3.2. Measures

The survey collected data using a structured questionnaire for respondent ease. Responses were recorded using a seven-point Likert scale (Murphy, 2023). The study utilized measurement instruments adopted from prior research and published sources:

- A CD scale comprising seven items was adapted based on Sweeney et al. (2000) and Soutar and Sweeney (2003) ($\alpha = 0.734$).
- The Rosenberg SE scale, comprising ten items, was adopted for SE (Rosenberg, 1965) ($\alpha = 0.88$).
- ECBB was assessed using a seven-item scale adopted from O'Guinn and Faber (1989) ($\alpha = 0.802$).
- Participants' perceived SA was measured on a five-item scale used by Wang et al. (2018) ($\alpha = 0.76$).
- NTB was calculated using a ten-item scale that combined elements from four different scales, as adopted by Seidman (2013). The constructs demonstrate acceptable to good internal consistency: information-seeking ($\alpha = 0.812$), communication ($\alpha = 0.847$), acceptance-seeking ($\alpha = 0.777$), and connection/caring ($\alpha = 0.729$).

3.3. Data Collection and Sampling Technique

A purposive cross-sectional survey was conducted to obtain study data through an online questionnaire, focusing on women who use social media. As a form of non-probability sampling, purposive sampling is appropriate for studies seeking to obtain information from a distinct and specific population exhibiting qualities pertinent to the study's aim (Palinkas et al., 2015). The population under study includes women in Pakistan who utilize social networking platforms to connect socially and engage in purchasing activities. There is no established sampling frame for this group, making the application of probability sampling methods inappropriate for the study. Purposive sampling thus allows for the intentional selection of participants who have the potential to yield rich, pertinent, and insightful data.

The sample size was determined based on guidelines proposed by Hair et al. (2009), who recommend an optimal sample size of 200–300 for quantitative studies in the social sciences. The study yielded 276 valid responses after data cleaning.

The use of social media to collect data for academic research is gaining prevalence (Van Wingerden et al., 2018). The integration of SNS in research markedly expands researchers' ability to reach large audiences, facilitating the acquisition of a representative sample and overcoming social and economic limitations. This study used a Google Form questionnaire to gather data from women on Facebook, Twitter, Instagram, and YouTube. Permission to do so was sought from the administrators of women-oriented communities on social media forums. Participants were asked to report concerns about questionnaire ambiguity. Their concerns were addressed through a comments thread. Finally, methodological and analytical measures were employed to address common method variance, as described by Podsakoff et al. (2003).

4. Data Analysis and Results

4.1. Demographic Analysis

Table 1 shows the demographics of our sample. Of 276 respondents, 55 percent are classified as housewives and 45 percent as professionals. The majority of these women primarily use Facebook. Of those, 33 percent are aged 31–40, demonstrating a greater rate of online purchases.

Table 1: Demographic analysis

Description	Class	Frequency	Percentage
Age (years)			
	< 20	20	7
	21–30	79	29
	31–40	92	33
	> 40	85	31
Education level			
	< Intermediate	40	14
	Graduation	115	41
	MPhil	53	19
	PhD	2	0.7
	Other	66	23

Description	Class	Frequency	Percentage
Monthly income (PKR)			
	< 50,000	20	7
	50,000–100,000	106	38
	101,000–150,000	93	33
	151,000–200,000	42	15
	> 200,000	15	5
Social networking platform			
	Facebook	151	55
	Twitter	19	8
	Instagram	70	23
	YouTube	23	9
	Other	13	5
Work status			
	Housewife	152	55
	Professional	124	45

4.2. Measurement Model Evaluation

The measurement model evaluation included reporting descriptive statistics, i.e., standard deviation and mean, and the correlations in Table 2. Caution is advised when interpreting fit indices, given the ongoing exploration of critical threshold values for model fit in PLS-SEM. This is because they may not necessarily reflect the model's fit (Hair et al., 2017). Therefore, some studies employing PLS-SEM omit reporting model fit indices (Rubel et al., 2021).

Table 2: Indicator reliability, convergent validity, and internal consistency

Item	Loading	Cronbach's α	CR	AVE
CD1	0.573			
CD2	0.536			
CD3	0.566			
CD4	0.817	0.857	0.889	0.549
CD5	0.874			
CD6	0.872			
CD7	0.844			
ECBB1	0.777			
ECBB2	0.779	0.904	0.905	0.635
ECBB3	0.813			

Item	Loading	Cronbach's α	CR	AVE
ECBB4	0.790			
ECBB5	0.783			
ECBB6	0.827			
ECBB7	0.808			
NTB1	0.795			
NTB2	0.795			
NTB3	0.812			
NTB4	0.812			
NTB5	0.523	0.903	0.920	0.539
NTB6	0.562			
NTB7	0.616			
NTB8	0.804			
NTB9	0.752			
NTB10	0.791			
SA1	0.568			
SA2	0.760			
SA3	0.796	0.728	0.979	0.538
SA4	0.787			
SA5	0.731			
SE1	0.754			
SE2	0.763			
SE3	0.710			
SE4	0.788			
SE5	0.759	0.912	0.916	0.558
SE6	0.769			
SE7	0.749			
SE8	0.701			
SE9	0.732			
SE10	0.741			

CR = composite reliability, AVE = average variance extracted, CD = cognitive dissonance, ECBB = e-compulsive buying behavior, NTB = need to belong, SA = social acceptance, SE = self-esteem.

The results indicate that most items have loadings above the recommended 0.7 threshold, indicating good reliability. Based on the practical significance guidelines advocated by Hair et al. (2014), factor loadings in the range of ±0.30–0.40 serve as the minimum criterion for

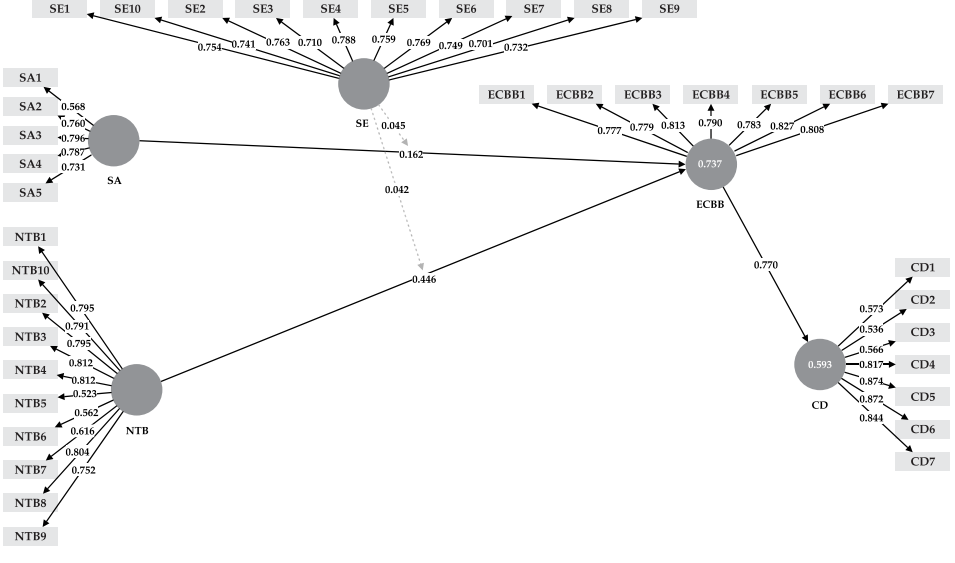
interpreting the underlying factor structure. Loadings of ±0.50 or higher provide evidence of practical significance, while loadings exceeding 0.70 show a well-defined and robust factor structure, indicating an optimal factor-analytic solution. The Cronbach's alpha values for all constructs exceed 0.7, showing strong internal consistency, with NTB having the highest reliability (0.903) and SA having the lowest (0.728). Composite reliability (CR) values exceed 0.7 for all constructs, indicating measurement consistency. The average variance extracted (AVE) exceeds 0.5 for most constructs, which shows that indicators capture substantial variance. The Heterotrait-Monotrait (HTMT) ratio (matrix) and measurement model are shown in Table 3 and Figure 2, respectively.

Table 3: HTMT ratio (matrix)

	CD	ECBB	NTB	SA	SE
CD					
ECBB	0.859				
NTB	0.763	0.851			
SA	0.806	0.837	0.811		
SE	0.824	0.850	0.792	0.798	

CD = cognitive dissonance, ECBB = e-compulsive buying behavior, NTB = need to belong, SA = social acceptance, SE = self-esteem.

Figure 2: Measurement model



The HTMT matrix confirms that all ratios between the constructs (CD, ECBB, NTB, SA, and SE) are below the recommended thresholds of 0.85 and 0.90, which proves that the constructs in the model are distinct and that the measurement model upholds good discriminant validity (Henseler et al., 2009).

The R^2 and adjusted R^2 values of CD and ECBB are given in Table 4. The R^2 value for CD is 0.591, indicating that the combination of SA and NTB explains 59.1 percent of the variance in CD. Similarly, the R^2 value for ECBB is 0.732, indicating that SA and NTB explain 73.2 percent of the variance in ECBB. These values imply a high explanatory power, especially in ECBB, where more than 70 percent of the variance is explained. These results indicate a good model fit compared to other similar studies, e.g., Henseler et a., (2009), where R^2 values of similar constructs ranged from 0.45 to 0.65. The very high explanatory power indicates that the chosen predictors (SA and NTB) are not only statistically significant but also practically significant in explaining the variance in both CD and ECBB, thereby strengthening the theoretical framework.

Table 4: Adjusted R^2

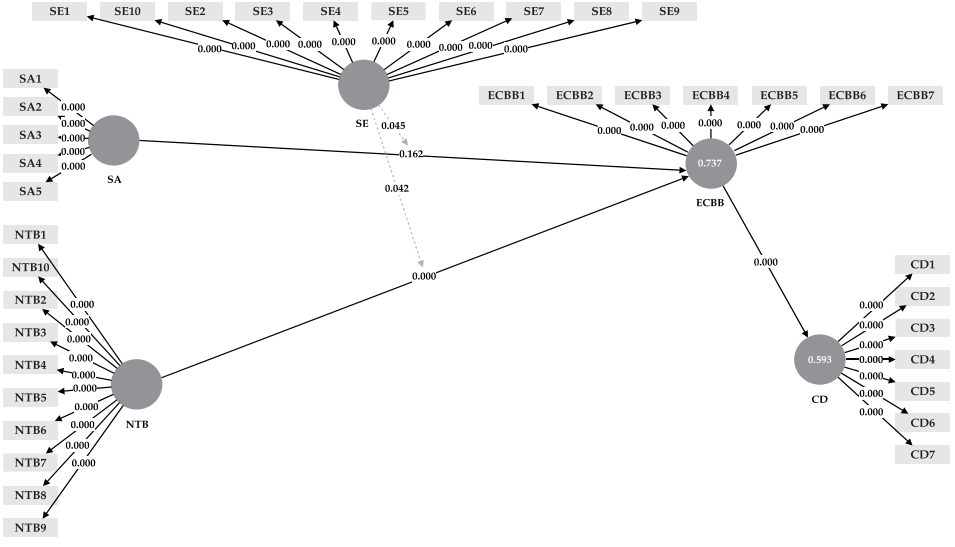
Variables	R^2 adjusted
CD	0.591
ECBB	0.732

CD = cognitive dissonance, ECBB = e-compulsive buying behavior.

4.3. Structural Model Evaluation

SPSS (v. 22) was used to run descriptive statistics, while SmartPLS 4 was used for inferential statistics (Ringle et al., 2023). PLS-SEM was chosen to handle multivariate data and complex relationships between variables (Hair et al., 2014). Figure 3 describes the structural model. The subsequent sections cover the descriptive statistics, measurement model analysis results, and structural model analysis.

Figure 3: Structural model



The inner variance inflation factor (VIF) values for the predictors of ECBB range from 2.416 to 3.231 and are shown in Table 5. Accordingly, all inner VIF values are below commonly accepted thresholds (4), indicating that collinearity is not a concern in the structural model.

Table 5: Inner model VIF

	ECBB
NTB	3.231
SA	2.416
SE	2.467

ECBB = e-compulsive buying behavior, NTB = need to belong, SA = social acceptance, SE = self-esteem.

The path coefficients and complete results of the structural model are shown in Table 6. The results indicate the existence of some important relationships among the major constructs. The highest direct impact is between ECBB and CD (0.770, t = 28.639, $p < 0.001$). This supports H5, indicating that CD increases by 77 percent as ECBB increases by 1 unit. This result highlights ECBB as a critical factor in determining the outcome of consumer decisions. Moreover, NTB has a significant impact on ECBB (0.446, $p < 0.001$), supporting H2, which indicates that consumer attitudes toward new technologies are key determinants of how consumers approach emerging consumption behaviors.

Table 6: Path coefficients

Hypothesis	Beta	St. dev.	t-value	p-value	Decision
ECBB → CD	0.770	0.027	28.639	0.000	Accepted
NTB → ECBB	0.446	0.052	8.520	0.000	Accepted
SA → ECBB	0.162	0.054	3.014	0.003	Accepted
SE → ECBB	0.388	0.058	6.657	0.000	Accepted
NTB → ECBB → CD	0.343	0.042	8.174	0.000	Accepted
SA → ECBB → CD	0.124	0.042	2.978	0.003	Accepted
SE → ECBB → CD	0.299	0.047	6.348	0.000	Accepted
SE × SA → CD	0.034	0.035	0.993	0.321	Rejected
SE × SA → ECBB	0.045	0.045	1.002	0.316	Rejected
SE × NTB → CD	0.032	0.040	0.811	0.418	Rejected
SE × NTB → ECBB	0.042	0.052	0.813	0.416	Rejected

ECBB = e-compulsive buying behavior, CD = cognitive dissonance, NTB = need to belong, SA = social acceptance, SE = self-esteem.

The results also support H1, as the coefficient of SA on ECBB is positive and significant. However, the magnitudes of the coefficients for SA ($\beta = 0.162$) and SE ($\beta = 0.388$) are relatively lower, indicating that SA and SE affect ECBB to a lesser extent. Therefore, SA and SE should be interpreted as meaningful but secondary contributors rather than dominant determinants of ECBB. Practically, an increment of 1 unit in SA or SE translates to a 16.2-percent or 38.8-percent increase in ECBB, respectively. On the other hand, the interaction terms (SE × SA and SE × NTB) produce weak or insignificant effects. This provides evidence against H6 and H7, indicating that these moderating relationships do not contribute to the model's explanatory power in this case. Finally, H3 and H4 are also supported, as both significantly mediate the impact of SA (0.124, $t = 2.978$, $p < 0.003$) and NTB (0.343, $t = 8.174$, $p < 0.000$) on CD. These findings point to the overarching importance of direct paths when compared to interaction effects and the salience of technology-related beliefs and behavioral confidence as drivers of consumer choice.

The f^2 values highlight the effect sizes in the model and are shown in Table 7. The largest effect is from ECBB to CD, with an f^2 value of 1.454, indicating ECBB's strong impact on CD. The effects of NTB on ECBB (0.234) and SE on ECBB (0.233) are moderate. In contrast, SA's effect on ECBB is smaller (0.041), suggesting a weaker influence. ECBB has the strongest

effect on CD. The remarkably large f^2 effect size of the ECBB-CD relationship suggests a high degree of conceptual and empirical similarity between the constructs since ECBB represents behaviors immediately preceding consumer decision-making. The HTMT results also reflect this conceptual closeness. VIF values within the acceptable range confirm that multicollinearity does not undermine the structural model's estimates.

Table 7: Path coefficients

Paths	f^2
ECBB → CD	1.454
NTB → ECBB	0.234
SA → ECBB	0.041
SE → ECBB	0.233

ECBB = e-compulsive buying behavior, CD = cognitive dissonance, NTB = need to belong, SA = social acceptance, SE = self-esteem.

The findings show a positive correlation between ECBB and the need for SA. They also align with the literature, which suggests that individuals engage in social comparison to appraise or improve aspects of themselves (Crusius et al., 2022). This further derives social identity and the pursuit of SA (Festinger, 1957), paving the way for CBB (Islam et al., 2018). Furthermore, the findings show a significant positive correlation between NTB and ECBB, aligning with past literature indicating that NTB prompts individuals to purchase goods they believe will enhance their status, appearance, or inclusion within specific social contexts (Schiffman et al., 2010). The positive correlation between ECBB and CD is also supported by the literature, which indicates that compulsive credit card purchases are associated with greater consumer guilt (Dugar et al., 2014).

In addition, the literature highlights that a positive relationship between hedonic and utilitarian shopping experiences in online advertisements triggers consumer guilt (Chauhan et al., 2020). SE's moderating role in the impact of SA and NTB on ECBB did not show an effect, thereby requiring us to reject these hypotheses. Cultural and contextual factors account for these findings and consist of social expectations, peer dynamics, and the online environment of SNS engagement, which diminishes SE's moderating effect.

5. Discussion of Findings

The current study's sample consists of educated women who experience peer influence and receive social support, i.e., there is no effect of low SE as a driver of CD. This phenomenon also aligns with the literature, suggesting that the effects of SE are mitigated due to contextual factors and social support (Yang & Brown, 2016). Furthermore, in collectivist cultures, SE tends to be shaped by interpersonal relationships and is closely tied to maintaining social harmony and gaining group approval rather than being rooted in individual autonomy or personal expression (Markus & Kitayama, 2014). As a result, SE may play a less central role in influencing behavior and decision-making in the Pakistani cultural context, where social belonging and acceptance are already strongly emphasized and deeply ingrained.

The findings further highlight that ECBB works as a catalyst to gain social approval rather than as an individual's self-evaluation mechanism. SE's moderating effect is absent in the findings, demonstrating the notion that in collectivist cultures, behavior is affected more by social factors than by personal self-evaluation (Markus & Kitayama, 2014). Hence, CD could arise from inconsistencies between socially driven buying behavior and post-purchase self-expectations. This would be consistent with self-discrepancy theory.

This study provides novel implications and contributes to the knowledge base, as CBB has already been investigated with psychological and social variables like impulsivity (Müller et al., 2015), anxiety and mood disorders (Paul et al., 2015), stress (Luigjes et al., 2019), personality traits (Gibbs & Oltmanns, 1995), substance use disorders (Mancebo et al., 2009), and social comparison (Attiq & Azam, 2015). Despite this, the current study addresses untouched dimensions in psychological and behavioral contexts, such as the role of NTB and SA in ECBB.

Furthermore, the current study investigates whether an individual's level of SE influences the strength or direction of the relationship between the need for belongingness and ECBB, as well as between SA and ECBB. SE has previously been studied as a moderator between perceived discrimination and psychological distress among women (Corning, 2002). Its moderating effect on women's responses to social comparisons has also been explored. However, the current study

provides a novel domain exploring the role of SE in moderating the relationship between NTB, SA, and ECBB.

These findings may increase public awareness concerning the potential psychological, physical, and social challenges related to ECBB and seeking online SA and belongingness. In this regard, the government could initiate public health initiatives and social media literacy programs, including financial literacy and impulse control training, to raise awareness among women of the psychological factors underlying ECBB. Moreover, the government could enhance users' and policymakers' understanding of the drivers of compulsive buying and support the development of protective interventions.

The findings may also guide SNS administrators in creating platforms that support users' psychological wellbeing, so that users, rather than seeking online social approval and belongingness, use such forums for productive and constructive purposes. For example, platforms could implement digital prompts or 'pause before purchasing' reminders to help curb impulsive buying behaviors driven by emotional triggers. To address digital overconsumption, policymakers, mental health professionals, and digital administrators should collaborate to design guidelines that raise public awareness of ECBB's consequences. Our findings also suggest that marketers and digital e-commerce platforms should develop product campaigns that emphasize authenticity, utility, and consumer wellbeing, rather than promoting social influence, comparison, or status enhancement. It is recommended that products not be promoted in a manner that manipulates audiences to boost their social status and incur economic burdens. Addressing these concerns may help stakeholders build a constructive society. In this regard, ethical campaigns may help consumers refrain from engaging in ECBB. Moreover, due to the association between social approval needs, ECBB, and CD, initiatives are recommended to mitigate platform-induced social comparison and emotionally stimulated consumption. E-commerce interfaces could integrate design features backed by empirical evidence, e.g., reminders to postpone buying or reduce social validation signals to minimize ECBB among women. Additionally, awareness strategies could help women identify community-driven buying drivers that intensify post-purchase dissonance.

6. Conclusion

The current study reports that SA and NTB factors significantly increase ECBB. Furthermore, ECBB behavior has a significant positive relationship with CD; the more involved a person is in ECBB, the more they indulge in CD. Despite this, SE does not show any moderating effect on online SA and the need for belongingness in relation to ECBB due to contextual and cultural aspects. These include normative social factors, peer influence, and the context of SNS engagement. The sample population of the current study comprises educated women with peer influence and social support. Thus, low SE does not affect the growth of CD.

The study has several limitations and offers suggestions for future research. First, the sample consists exclusively of women. Future studies could benefit from including a more diverse sample, incorporating both genders. Additionally, since the current sample is limited to educated women, future research could explore qualitative interviews with women with lower literacy levels to assess SE's influence on ECBB in a different demographic. Second, the study relies on self-reported measures, which may be subject to bias. Third, the study's cross-sectional survey approach may inflate the risk of common method variance, which could overstate the relationships between constructs. Future studies could address these limitations by using multi-method approaches and longitudinal designs.

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